## (19) World Intellectual Property Organization International Bureau





### (43) International Publication Date 20 September 2001 (20.09.2001)

### **PCT**

# (10) International Publication Number WO 01/68227 A1

(51) International Patent Classification7:

B01D 61/10

(21) International Application Number: PCT/US00/06848

(22) International Filing Date: 15 March 2000 (15.03.2000)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant (for all designated States except US): KI-NETICO INCORPORATED [US/US]; 10845 Kinsman Road, Newbury, OH 44065 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only) HALEMBA, Peter

[US/US]; 7907 Thornapple Drive, Russell, OH 44072 (US)/ELLIS, George, III [US/US]; 14820 Stillwell Road, East Claridon, OH 44033 (US).

(74) Agent: HLAVKA, John, R.; Watts, Hoffmann, Fisher & Heinke Co., L.P.A., P.O. Box 99839, Cleveland, OH 44199-0839 (US).

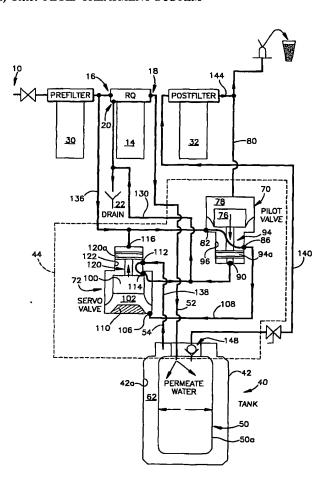
(81) Designated States (national): CA, US.

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

#### (54) Title: FLUID TREATMENT SYSTEM



(57) Abstract: A water treatment system having a reverse osmosis unit (14) includes a storage tank (40) having an outer tank housing (42) that encloses an expandable bladder (50). A pressurized region (62) is defined between the outside of the bladder (50) and inside of the housing (42). A control valve assembly (44) controls communication of source water under pressure to pressurizing region (62) and communicates the region (62) with a drain (22). The assembly (44) includes a pilot valve (70) that is responsive to a state of dispensing and includes a valve element (76) that moves between a first dispensing position and a second non-dispensing position. A servo valve (72) is responsive to position of the pilot valve (70) and communicates source water under pressure to the region (62) when the pilot valve (70) is in the first position thus applying pressure to bladder (50) to expel treated water and communicates region (62) to the drain (22) when dispensing is not occurring so as to allow bladder (50) to expand as it receives treated water from the reverse osmosis unit (14).

VO 01/68227